

Listing of Claims:

1. (Currently amended) A measuring device for determining the radiant heat flux absorbed [received] by a test specimen in a fire test apparatus, the specimen having an area exposed to radiant heating and being held in a specimen holder and coated with [having] a coating to simulate the heat absorption of a material or object during a fire, [to improve the absorption of the radiant heat flux] comprising:

a body;

a coating on said body, the coating on said body being the same as the coating on the test specimen;

a holder for said body that is the same as the specimen holder in which the specimen is held;

an electrical heating element in heat transfer relationship with said body, free from interposition, between the heating element and said body, of the coating on said body; and

a thermal detector indicating the temperature of the body.

2. (Currently amended) The measuring device of claim 1, wherein said body has an area exposed to radiant heating that is the same as the area of the specimen that is exposed to radiant heating [a shape similar to that of a test specimen].

3. (Original) The measuring device of claim 2, wherein said body is made of copper.

4. (Original) The measuring device of claim 2, wherein said body is a metal disk.

5. (Original) The measuring device of claim 1, wherein the electrical heating element is positioned within said body.

6. (Original) The measuring device of claim 1, wherein the electrical heating element is an electric resistance heating element.

7. (Original) The measuring device of claim 1, wherein the thermal detector is a thermocouple connected to said body.

8. (Original) The measuring device of claim 1, further comprising an insulated holder for said body, wherein said body has a first surface to which the coating is applied and at least one other surface, said first surface being exposed for receiving radiant heat flux, and said other surface being covered by the insulated holder.

9. (Original) The measuring device of claim 1, further comprising means for indicating the electrical power applied to the electrical [electric-resistance] heating element.

10. (Currently amended) A measuring device for determining the radiant heat flux absorbed [received] by a test specimen in a fire test apparatus, the specimen having an area exposed to radiant heating and being held in a specimen holder and coated with [having] a coating to simulate the heat absorption of a material or object during a fire, [to improve the absorption of the radiant heat flux] comprising:

a body;

a coating on said body, the coating on said body being the same as the coating on the test specimen;

a holder for said body that is the same as the specimen holder in which the specimen is held;

an electrical heating means in heat transfer relationship with said body, free from interposition, between the heating means and said body, of the coating on said body; and
means for indicating the temperature of the body.

11. Cancelled

12. (Original) A method for measuring the response of a material or device to fire comprising:

a) coating a specimen of the material or device to simulate the heat absorption characteristics of the material or device in a fire;

b) providing a measuring device for measuring heat flux absorbed in a fire;

c) coating the measuring device with the same coating as the specimen;

d) applying a first level of radiant heating produced by a first constant power input to the measuring device through the coating at a known angle of incidence to heat the

- measuring device through a plurality of selected temperature increases;
- e) measuring the times required to heat the measuring device through the selected temperature increases by the radiant heating;
- f) repeating steps d) and e) for other levels of radiant heating in order to obtain a first set of data based on measurements at all of the levels of radiant heating;
- g) reducing the radiant heating to zero and substituting a first level of electrical resistance heating of the measuring device produced by a first constant power input to heat the measuring device through said plurality of temperature increases;
- h) measuring the times required to heat the measuring device through the selected temperature increases by the electrical resistance heating;
- i) repeating steps g) and h) for other levels of electrical heating in order to obtain a second set of data based on measurements at all of the levels of electrical heating;
- j) plotting the temperature versus time *for* both sets of data in order to generate lines from plotted points;
- k) determining, by interpolation, of the lines at common temperatures, the level of electrical heating that most closely matches each level of radiant heating in order to obtain a first interpolation set;
- l) determining, by interpolation of the lines at common times, the level of electrical heating that most closely matches each level of radiant heating in order to obtain a second interpolation set; and
- m) averaging both interpolation sets to find the electrical power that most closely matches each level of radiant heating and thereby determine the absorbed heat flux for each level of radiant heating.

Claim 13. (New) A method for calibrating a radiant heater of a fire test apparatus with respect to heat flux absorbed by a specimen in the fire test apparatus, the specimen having an area exposed to radiant heating and being held in a specimen holder and coated with a coating to simulate the heat absorption of a material or object during a fire, comprising:

providing, for measuring heat flux absorbed in a fire, a measuring device that has an area exposed to radiant heating that is the same as the area of the specimen that is exposed to

radiant heating;
holding the measuring device in a specimen holder that is the same as the specimen holder in which the specimen is held; and
coating the measuring device with the same coating as the specimen.

Claim 14. (New) The method of claim 13, further comprising:
applying radiant heating to the measuring device through the coating at a predetermined angle of incidence to heat the measuring device to a steady-state temperature.

Claim 15. (New) The method of claim 14, further comprising:
measuring the power required to heat the measuring device to the steady-state temperature by the radiant heating;
reducing the radiant heating to zero and substituting sufficient electrical resistance heating of the measuring device to heat the measuring device to the steady-state temperature;
measuring the electrical power required to heat the measuring device to the steady-state temperature by the electrical resistance heating;
applying radiant heating to the specimen through its coating at said predetermined angle of incidence to heat the specimen to a predetermined condition in response to the heating;
measuring the power required to heat the specimen to the predetermined condition by the radiant heating; and
applying to said measurement the ratio of a) the electrical power required to heat the measuring device to the steady-state temperature by the electrical resistance heating to (b) the electrical power required to heat the measuring device to the steady-state temperature by the radiant heating, in order to adjust the measuring of the power required to heat the specimen to take into account the effect of the coating and the angle of incidence on the radiant heating of the specimen.